PAM100-Optimized_Matrix

	A	R	N	D	C	Q	E	G	H	I	L	K	M	F	P	S	T	W	Y	V	B	Z	X	*
A	3.3	-9.1	-4.3	-6.4	0.2	-0.4	-12.5	-3.2	-3.9	-4.1	2.7	0.2	-1.3	-4.4	3.6	0.5	-0.1	-6.6	3.1	-3.6	-1	-1	-1	-9
R	-9.1	3.8	0.2	-5.6	-1.2	-2.8	-10.9	-12.5	0.0	-11.4	2.6	-2.3	-5.6	-3.0	5.8	-5.7	0.4	1.8	-10.0	-2.0	-3	-1	-2	-9
N	-4.3	0.2	0.6	5.1	-5.2	3.6	-0.9	-3.7	-0.3	-20.4	-4.6	5.1	-2.1	-7.6	-8.4	4.0	-10.3	-3.7	-1.6	-7.0	4	0	-1	-9
D	-6.4	-5.6	5.1	3.0	-11.6	6.2	8.1	-4.2	-0.2	-2.7	0.0	6.7	-3.8	-7.2	-7.5	2.9	-1.9	-9.5	-6.6	-8.5	4	3	-2	-9
C	0.2	-1.2	-5.2	-11.6	9.0	-9.3	-5.0	-2.2	-4.8	-3.6	-10.9	-5.7	-5.9	-6.5	-4.5	-2.0	-4.2	-10.2	0.0	-5.7	-6	-8	-5	-9
Q	-0.4	-2.8	3.6	6.2	-9.3	5.2	0.1	1.9	8.6	-10.5	-2.2	-3.0	0.1	-6.6	-4.2	-1.2	3.8	-6.5	-10.7	-7.4	0	5	-2	-9
E	-12.5	-10.9	-0.9	8.1	-5.0	0.1	9.0	6.2	-0.8	-4.1	-6.0	0.7	-6.1	-10.5	-9.8	-6.4	6.6	-10.8	-3.8	-2.9	3	4	-2	-9
G	-3.2	-12.5	-3.7	-4.2	-2.2	1.9	6.2	2.9	-8.1	-4.4	8.5	-3.8	-0.6	9.8	-11.7	-0.6	5.4	-11.8	1.9	6.1	-1	-2	-2	-9
H	-3.9	0.0	-0.3	-0.2	-4.8	8.6	-0.8	-8.1	9.9	-8.6	0.4	-2.5	-3.7	-3.7	-3.4	-3.4	-7.1	-3.3	1.8	-2.9	1	1	-2	-9
I	-4.1	-11.4	-20.4	-2.7	-3.6	-10.5	-4.1	-4.4	-8.6	6.6	-2.1	2.9	-6.6	6.3	-7.4	-0.4	2.5	-5.4	-2.4	0.7	-3	-3	-2	-9
L	2.7	2.6	-4.6	0.0	-10.9	-2.2	-6.0	8.5	0.4	-2.1	9.9	3.7	9.8	-2.8	0.2	-11.9	1.7	-2.9	-10.3	2.3	-5	-4	-3	-9
K	0.2	-2.3	5.1	6.7	-5.7	-3.0	0.7	-3.8	-2.5	2.9	3.7	4.2	-0.4	-9.2	-1.8	0.8	-7.2	-4.4	-10.4	-1.9	0	-1	-2	-9
M	-1.3	-5.6	-2.1	-3.8	-5.9	0.1	-6.1	-0.6	-3.7	-6.6	9.8	-0.4	10.5	-3.2	-7.9	-2.7	4.2	-6.9	-6.9	-5.6	-4	-2	-2	-9
F	-4.4	-3.0	-7.6	-7.2	-6.5	-6.6	-10.5	9.8	-3.7	6.3	-2.8	-9.2	-3.2	7.3	-8.4	-5.1	0.0	-0.4	7.3	-1.0	-6	-7	-4	-9
P	3.6	5.8	-8.4	-7.5	-4.5	-4.2	-9.8	-11.7	-3.4	-7.4	0.2	-1.8	-7.9	-8.4	5.2	3.6	-7.9	-8.3	-5.6	2.0	-3	-1	-2	-9
S	0.5	-5.7	4.0	2.9	-2.0	-1.2	-6.4	-0.6	-3.4	-0.4	-11.9	0.8	-2.7	-5.1	3.6	3.7	1.7	-1.8	-5.2	-10.0	0	-2	-1	-9
T	-0.1	0.4	-10.3	-1.9	-4.2	3.8	6.6	5.4	-7.1	2.5	1.7	-7.2	4.2	0.0	-7.9	1.7	7.5	-8.3	-7.9	3.1	-1	-2	-1	-9
W	-6.6	1.8	-3.7	-9.5	-10.2	-6.5	-10.8	-11.8	-3.3	-5.4	-2.9	-4.4	-6.9	-0.4	-8.3	-1.8	-8.3	11.5	-0.8	-10.6	-6	-8	-6	-9
Y	3.1	-10.0	-1.6	-6.6	0.0	-10.7	-3.8	1.9	1.8	-2.4	-10.3	-10.4	-6.9	7.3	-5.6	-5.2	-7.9	-0.8	8.8	3.7	-4	-6	-4	-9
V	-3.6	-2.0	-7.0	-8.5	-5.7	-7.4	-2.9	6.1	-2.9	0.7	2.3	-1.9	-5.6	-1.0	2.0	-10.0	3.1	-10.6	3.7	2.6	-4	-3	-2	-9
B	-1	-3	4	4	-6	0	3	-1	1	-3	-5	0	-4	-6	-3	0	-1	-6	-4	-4	4	2	-2	-9
Z	-1	-1	0	3	-8	5	4	-2	1	-3	-4	-1	-2	-7	-1	-2	-2	-8	-6	-3	2	5	-2	-9
X	-1	-2	-1	-2	-5	-2	-2	-2	-2	-2	-3	-2	-2	-4	-2	-1	-1	-6	-4	-2	-2	-2	-2	-9
*	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	1